

A Corporate Publication of Santee Cooper

POWERSOURCE

Fall 2011



From the CEO

At best, economic news over the past several months has been mixed. As I write this, the unemployment rate for South Carolina remains in double digits and is slightly higher than a year ago. Nationally, economic distress remains a hot topic in Congress and in the 2012 presidential race.



And yet the Environmental Protection Agency continues to advance an agenda of stifling regulations that will drive electricity costs skyward and drive more U.S. jobs overseas. Our economy will continue to falter, and ironically, the environment the EPA is trying to improve will actually be worse off as our manufacturers set up shops in less-regulated countries.

One of the most onerous proposals is the Maximum Achievable Control Standard, or MACT rule. MACT would set maximum standards for

permissible levels of emissions by coal-fired power plants. The goal is to remove 95 percent of certain emissions from power plants, and Santee Cooper already has environmental control technology in place that removes on average up to 93 percent of those emissions.

In short, this rule could cost our customers hundreds of millions of dollars in upgrades for a negligible improvement in emissions control. Even worse, it could force Santee Cooper to close paid-for units at our Jefferies and Grainger generating stations, nearly 10 percent of our total generation.

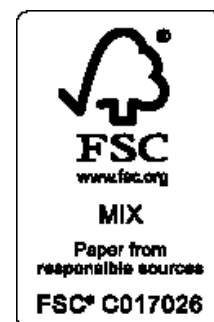
Another EPA proposal would classify ash and other combustion byproducts as “hazardous,” a label that is unwarranted and would likely end a successful recycling program for Santee Cooper. Our synthetic gypsum actually brought wallboard maker American Gypsum (and dozens of jobs) to Georgetown County, where they recently built a plant and are repurposing that gypsum. If the EPA declares those byproducts “hazardous,” Santee Cooper would need to landfill the ash and gypsum in hazardous waste landfills, which would require either lengthy permitting to build here in South Carolina or costly transporting of the material to landfills in other states.

These are just two examples of the havoc EPA could be wreaking, and I encourage you to visit the Energy Matters section at www.santeecooper.com for a more complete picture.

Fortunately, opposition is mounting. The Wall Street Journal recently criticized EPA for writing destructive rules that jeopardize electrical grid reliability and noted that the agency is even finding critics within the Obama administration. In Congress, the House has passed legislation to delay some proposed regulations and create an inter-agency committee that would review EPA's most costly proposed regulations.

For our part, Santee Cooper continues to educate key stakeholders on how these proposed rules will burden our customers and state. Our focus remains on providing affordable and reliable power and water to our customers in an environmentally friendly manner. This priority is getting tougher by the day, thanks to these proposed regulations.

Lonnie N. Carter
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Fall 2011— Vol. 11, No. 4

PowerSource is published by Santee Cooper Corporate Communications.

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Photography by Jim Huff

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CUSTOM REBATES: Have it Your Way

By PhŌ FaŌ

Photography
by Jim Huff

Your business,
it's different, unique.
Just like fingerprints
and snowflakes, every
business is an individual
with singular characteristics,
strengths and needs. Santee
Cooper developed the Reduce
the Use Business: Custom Rebates
to help meet those needs.

"Lighting, heating and air, and refrigeration are the biggest users of electricity in most businesses. We already offer rebate programs through our Prescriptive Rebate program launched at the beginning of this year," says Philip Greenway, Santee Cooper Principal Engineer, one of the program architects. "But we know that one size doesn't fit all. The Custom Rebates program provides incentive to owners and energy managers to take a closer look at the other areas where they use electricity and work with us to identify and make efficiency improvements."

“The program provides a rebate of ten cents per kilowatt-hour saved in the first year,” offers Juan Holmes, Manager of Conservation and Energy Efficiency. “You may think one dime at a time isn’t that much, but they really add up... for any single project, rebates can add up to \$200,000. All totaled, a single company may qualify for up to \$300,000 in Reduce The Use Business rebates.”*

Santee Cooper saves by avoiding the cost of prematurely building new power generation, using fuel to generate the additional energy or purchasing power on the sometimes-overheated open market.

Before Santee Cooper goes into the field with a program of this magnitude, we entice a few customers to participate in the pilot phase. David Nelson, executive vice president of Plantation Resort in Surfside Beach, was of one of those early adopters. When we asked the self-described man of few words what he thought of the program, he offered, “Hey, it’s great!”

Plantation Resort opted to add Variable Frequency Drives, or VFDs, to the three pumps that keep their lazy river flowing. Normally pumps, and all motors, have two states, *wide open* and *off*. VFDs control the rotational speed of an alternating current (AC) electric motor by attenuating the power frequency. Plus, since the pumps and motors don’t run wide open all the time and can gently ramp up to speed, instead of enduring shaft jarring hard starts, they last longer. It’s kind of like a dimmer, but not exactly. Actually, it’s pretty complicated stuff governed by “The Affinity Laws” of physics. The short of it is: For once, the math always works out in your favor if you’re the one paying the bill.

“It’s saving us money on energy and maintenance, and even labor costs,” adds Nelson. “The VFDs are programmed to automatically

control pumps, so no one has to stop what they’re doing and manually cycle the pumps on and off twice a day.”

Santee Cooper Trade Allies will also be key to the success of the program. These are professionals from various trade disciplines that install the energy saving improvements.

“Along with Santee Cooper’s energy advisors, the Trade Allies are the front line sales force for our programs,” offers Holmes. “They uncover these opportunities in the regular course of doing their jobs. The rebates help make the improvements more affordable, sell customers on the improvements and generate work for Trade Allies. The ongoing energy savings drive a quick return on investment.”

Mark Caldwell, General Manager of Pool Services, is the Trade Ally that completed the Plantation Resort project. He was skeptical of the technology at first and now is driven to save customers money and energy.

“My initial reaction was the same as most everyone I’ve presented VFD savings to,” Caldwell quips. “It’s too good to be true. But I’m here to tell you, I’ve been in this business for 35 years, and the numbers do not lie. It works, period. How many times do you get an opportunity to represent something like that?”

He’s right.

Over their six-year warranted life, these three devices will save about 386,100 kilowatt-hours of electricity. That’s about the same amount of power as can be generated by all the hydro units at Jefferies Generating Station running wide open for a three-hour period, or enough electricity to power over 27 average South Carolina homes for one

For any single project, rebates can add up to \$200,000.

PLANTATION RESORT - LAZY RIVER	
ANNUAL ENERGY COSTS	
EXISTING TOTAL ANNUAL ENERGY COSTS	\$ 8,627.45
UPGRADED TOTAL ANNUAL ENERGY COSTS	\$ 3,677.96
ANNUAL ENERGY SAVINGS	\$ 4,949.49 (57.40%)
TOTAL 5 YEAR ENERGY SAVINGS (kWh + kW)	\$ 24,747.45
CAPITAL PROJECT - PAY BACK PERIODS	
3 VFDs PROJECT COST:	\$ 18,000.00
SIMPLE PAY BACK (WITHOUT REBATE)	3.63 YEARS
CUSTOM REBATE (\$0.10/Annual kWh Saved)	\$ 6,435.00 (35.7%)
SIMPLE PAY BACK WITH REBATE	2.33 YEARS

full year. FYI, there are dozens of lazy rivers flowing along the Grand Strand. This is just one example of the measures that may qualify under the Custom Program.* Some other examples are:

- HVAC Upgrades (like a constant volume system upgraded to a variable air volume system)
- Chiller upgrades (adding variable speed drives and control upgrades)
- Increased air compressor system efficiencies (installing VFDs and fixing air leaks)
- Control applications (such as installing building energy management control systems)
- Process Improvements (like temperature reset and eliminating simultaneous heating and cooling)

“Ultimately it’s like the old commercial that says you can ‘Have It Your Way.’ Come to us with your energy saving ideas and opportunities. We’ll run the numbers and if they add up, we’ll help you fill out the application, find a Trade Ally and put you on the road to a rebate and energy savings,” adds Greenway. “It’s really a winning proposition all the way around; for the participating customer, our trade ally and Santee Cooper.”

For more details, visit www.reducetheuse.com or call an energy advisor at 843-347-3399 extension 3910. **PS**

**Please see program documentation and terms and conditions for complete details.*

Employee Volunteers

By Mollie Gore

Photography by Jim Huff

Making a
Difference
in our
Communities





Nearly every Wednesday afternoon, a group of dedicated Santee Cooper employee volunteers gather in the Moncks Corner canteen to work on a cure for cancer – one popcorn kernel at a time. Holly Orvin, human resource associate, serves up the weekly batch of fresh-popped popcorn as a Santee Cooper Relay for Life volunteer fundraiser.

Over the past decade, the Santee Cooper Relay for Life teams have sold tens of thousands of bags of popcorn. It's a staple of the employees' year-round fundraising effort for the American Cancer Society.

This isn't just chicken scratch: Team donations total more than a half-million dollars since 2001. And it is just one example among hundreds of Santee Cooper employees volunteering to improve the world around us, with the scope of their efforts touching more needs than we could list here, from education to financial stability and yes, vital health issues such as cancer research.

Employees are involved individually and as teams. They work as official representatives of Santee Cooper, and as unofficial stewards of hope. The volunteer work is done by the employees, and much of their efforts are supported by corporate policy.

"Santee Cooper, as a responsible corporate citizen, promotes corporate volunteerism through the use of its resources in support of approved community programs, activities and critical needs," reads the corporate policy on community outreach and volunteerism. Why? Such activity is "important in carrying out prudent business operations."

Or, as President and CEO Lonnie Carter often says, "A rising tide lifts all boats. When we improve the circumstances in one area of our community, we improve the circumstances for all of us."

Santee Cooper's biggest employee effort, in terms of dollars and scope of participation, benefits United Way campaigns in Santee Cooper's core business operating areas. Santee Cooper has the largest employee campaigns to the Trident United Way (covering Berkeley, Charleston and Dorchester counties) and Horry County, and is among the largest in Anderson and Georgetown counties as well.



Santee Cooper employees show up in force for the annual United Way Day of Caring. Here, Financial Analyst II Bakari Jackson spruces up the school colors at a Berkeley County school.

Kathleen Simmons, senior financial associate, welcomes Santee Cooper employees to an awareness event the HeartStrong team held to benefit the American Heart Association.



Santee Cooper's board of directors has approved a dollar-for-dollar match for these campaigns for the past several years. In 2010 alone, Santee Cooper employees donated more than \$460,000 to those four United Way campaigns. Dozens of Santee Cooper employees also serve on United Way committees that evaluate agency requests and approve where those donated dollars go. And Carter is chairman of the Trident United Way Board of Directors, a position he is serving for a second consecutive year.

"The United Way has a proven record of channeling donations to agencies that demonstrate results," says Mark Pilgrim, director of local government and community programs. "It's a business-oriented approach to running a charity, and Santee Cooper and our employees are comfortable knowing that their money will be put to use where it is most needed, community by community. The United Way also allows

employees to specify where their donations can go, and I think that's a benefit in many employees' minds."

Beyond the United Way and Relay for Life teams in Moncks Corner and Horry County, teams of Santee Cooper employees also work for Junior Achievement, the March of Dimes, several school mentoring programs and, most recently, the American Heart Association.

Queen Mack, human resources associate, heads up the HeartStrong team, which seeks to raise \$10,000 this year for the American Heart Association. "Heart disease affects everyone in some form or fashion, either directly or by striking a family member," Mack says, citing statistics about the prevalence and cost of heart disease. "The funds we are raising support education, advocacy and research."



Materials Analyst Aaron Reiss volunteers his musical talents and his hair, among other charitable gifts.

HeartStrong activities also support education, Mack notes. The breakfasts they organize feature heart-healthy foods, like egg substitutes, lean turkey bacon, and oatmeal. They have paired heart-healthy lunches (recipes included!)

with fitness walks and classes, giving back to employees who are giving to the cause. Beyond interactions with Santee Cooper's workforce, HeartStrong members are also hosting community events that increase the reach of their educational efforts.

Santee Cooper also supports individual employees who get involved in their communities, allowing flexible workdays and other accommodations as long as the volunteer work doesn't interfere with the employee's job responsibilities.

"There is truly a culture of giving back here," notes Jim Brogdon, executive vice president and general counsel, who ensures that

charitable requests for donations and corporate volunteer support meet Santee Cooper's policies for community involvement. "It seems that every day, I'll hear from someone in the community about the good works one or more of our employees is doing out there. The variety of causes and level of involvement is vmind-boggling."

Materials Analyst Aaron Reiss is involved in several charitable efforts, ranging from student mentoring in Horry County to fundraising to provide safe drinking water in Africa. "I think it means a lot that Santee Cooper allows us to be active in the community," he says.

Reiss is working to help children in a less conventional way: he is growing his hair to donate it to Locks of Love, where he hopes it will be used to make wigs for children suffering from cancer. "People tell me I have beautiful hair, so I figured I'd put it to good use," he says.

An avid guitarist, Reiss has even found a way to parlay that hobby

into a volunteer initiative: he donates his performances to quarterly art shows in Conway, providing entertainment while people browse through art displays.

Customer Service Supervisor Linda Pickens, a 28-year veteran of Santee Cooper, has a long and diverse list of volunteer efforts. She just ended a term as president of the Lions Club in Conway, she is a past vice-president of the board of the Horry County Habitat for Humanity, and she coordinates Santee Cooper's business partnership with Loris Elementary School.

Pickens joined the Lions Club about eight years ago, at the advice of a customer. "Lions stand for 'we serve,' and that's what I like to do.

Senior Customer Services Representative Linda Pickens has greeted Santee Cooper customers at her Conway office with a friendly smile for years. She volunteers that same smile while working with one of her favorite charities, the Lions Club, and she enjoys the many smiles she receives in return.

It's what I do here at work. I serve my customers." She added that her zodiac sign is Leo, the lion.

Her favorite activity with the Lions Club is the annual presentation of bikes donated for needy children. "When the parents pull up and see the bikes, it touches my heart to see the smiles on their faces," she says. "You can't put a price on a smile."

For Ozell Newman, principal engineer in distribution planning, volunteerism started when he was a student at the University of South Carolina. He joined a service fraternity and remains a life member. His volunteer efforts have evolved as his life has changed.

Through Alpha Phi Alpha Fraternity Inc., "We do a lot of work in the community, such as youth mentoring, scholarships, voter registration



Principal Engineer Ozell Newman has adapted his volunteerism as his life has changed, most recently adding roles as youth sports coach and Cub Scout leader alongside other initiatives he has maintained since college.

and fundraising for the March of Dimes,” Newman says. “Now I have children, and I am helping coach their sporting activities and serving as a Cub Scouts den leader.”

Newman is on an advisory board for his community recreation center and most recently, he’s joined the USC Alumni Club’s new chapter in Myrtle Beach, working to build a membership there.

Kearney Gregory and Bill Quam also work with underprivileged or disabled children, through school mentoring programs and outside of school.

Gregory, engineering associate at Jefferies Generating Station, leads the Jefferies business partnership with Macedonia Middle School. She organizes and volunteers for several student mentoring initiatives, helped develop and now executes a class-building competition, and works with her colleagues on extras such as raising money to donate a Christmas tree to the school for the holidays.

“It’s important for Santee Cooper to have a presence there, and it’s important to me that I be there too,” Gregory says. “The teachers there are wonderful, and still it takes more than a teacher to educate a child. It takes all of us.”

Quam, director of asset accounting, also works with school students, and he doesn’t



go alone: he brings his rescue dog, Kelly. The poodle-terrier mix gives Quam “instant credibility” with the students at Lamb Elementary School in Charleston, and with MUSC patients he visits too. He and Kelly are graduates of pet therapy training and make weekly visits through Therapy Dogs Inc.

At Lamb, Quam and Kelly are paired with a student and get together twice a month through the school’s “Woof to Read” program. Many children and



Kearney Gregory, engineering associate, leads Santee Cooper's business partnership with Macedonia Middle School, helping with everything from academic extras to team leader for field day activities.

teens are apprehensive about working with an adult they've just met. But Kelly, a poodle-terrier mix, is a real ice-breaker. "We talk about what's going on in their lives, about good school and homework habits, and then we read," Quam says. "These are kids with reading difficulties, and so they read a book to me and Kelly. I prepare them afterwards for a quiz."

Whether his audience is a student or an MUSC patient, Quam says it's been a wonderful experience. "I don't think I could ever give up my pet therapy work," he says.

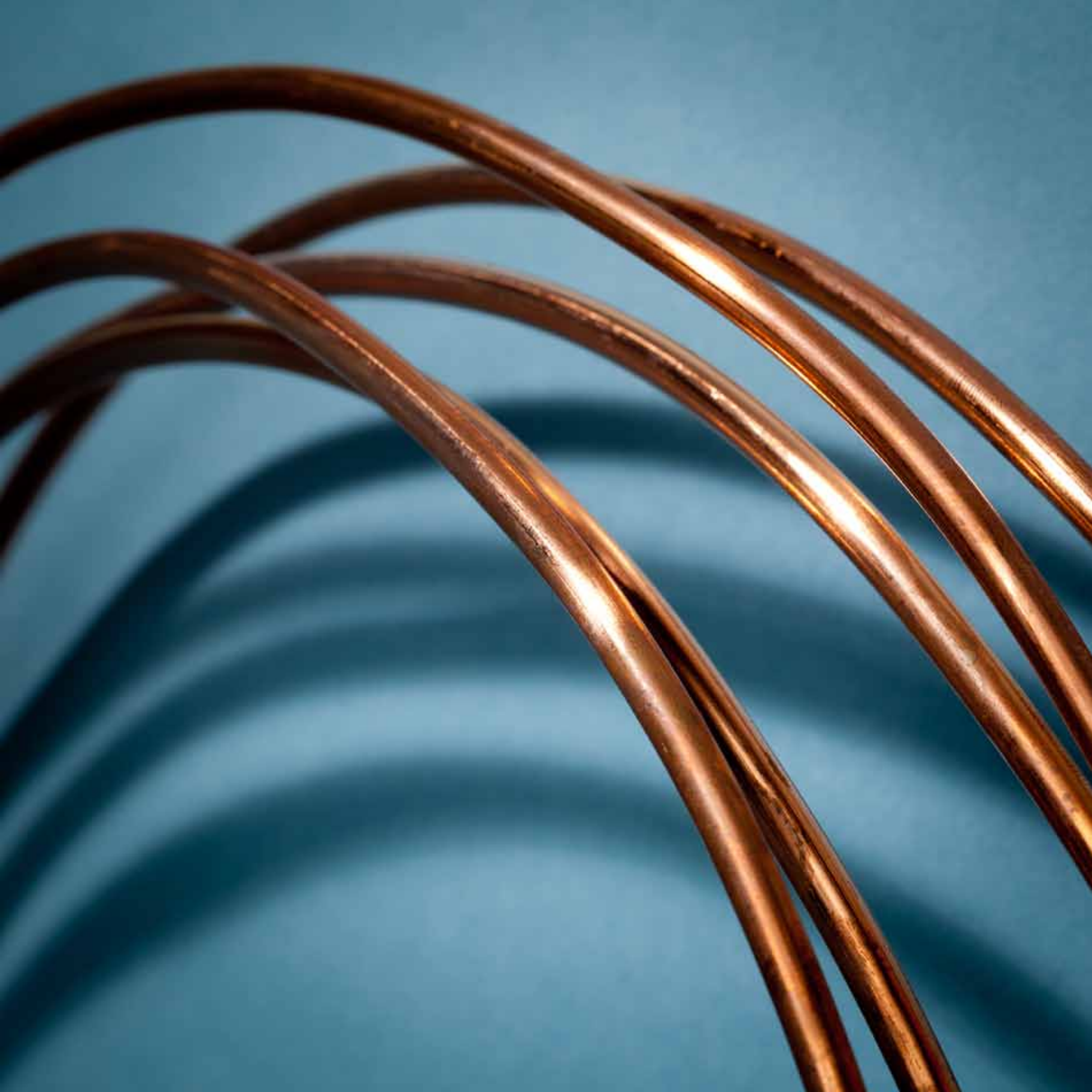
Brogdon says that the volunteer spirit at Santee Cooper makes his job easier. "Santee Cooper and our employees should support community investment that is in line with our mission. I know that our employees are so involved in the community, and that helps when I do have to turn down requests for corporate support. I know that somehow, some Santee Cooper employee is probably helping meet that need already, and that's a good feeling." **PS**

By Kevin F. Langston

Santee Cooper's Law Enforcement and Security:

Cracking Down on Copper Theft

Photography by Jim Huff



On Aug. 28, 2008, Trip Anderson got into a foot chase with a copper thief. It was his first day on the job as a Senior Special Agent for Santee Cooper's Law Enforcement and Security division. Anderson ran down and arrested the suspect, "and it was on from there," he says.

In the past four years, Law Enforcement & Security has arrested 80 people in connection with copper theft. As a state-owned utility, Santee Cooper Law Enforcement and Security has the ability to arrest and conduct SLED investigations. "It's not all we do, but a lot of our time is spent on copper theft," Anderson says.

In an April 2007 report titled "An Assessment of Copper Wire Thefts from Electric Utilities," the U.S. Department of Energy wrote:

"Fueled by economic growth, worldwide demand for copper has risen over the past several years. Supply has been unable to keep pace, pushing prices dramatically upward....Tight supplies have lead to an increase in copper recycling, which, in turn, has created a market for used copper and made the material a more attractive target for theft. In fact, thefts of copper wire have been on the rise across the United States, with no apparent geographic pattern, and all sectors that use the material, including electric utilities, are being targeted. Theft of copper wire from utilities occur primarily at substation transformers, from utility poles, or from the back of service trucks. The thefts have several adverse consequences, including the obvious economic impact, service disruptions, and possibly personal injury or death for persons involved in the theft or subsequent recovery efforts."

Conservative estimates at the time of the report indicated copper thefts were costing the nation \$1 billion a year. According to a February article published in "The New York Times," the FBI considers copper theft to be a threat to the nation's baseline ability to function.

"It became a major problem for us about four years ago," says Ed Cummings, chief of Santee Cooper's Law Enforcement & Security. "We decided back then that we needed to do something. They were stealing from our warehouses and substations. People were stealing grounding wire from our utility poles."

Between 2003 and 2006, the DOE report says the price for copper rose from 70 cents a pound to \$4 a pound. At the time the report was published, copper was fetching about \$3.50 per pound. Today, the price of copper is back at \$4 per pound.

"With those kinds of prices and a slumping economy, it didn't take these guys long to see dollar signs," Cummings says.

Law Enforcement & Security has been up to the challenge. Of the 80 arrests they've made over the past four years, Cummings says all have either plead guilty or been found guilty.

"Some are still waiting for their court date, but so far we've never lost a case," Cummings says. "And we don't just charge them with the theft of the copper, we charge them with Malicious Injury to a Public Utility. That's a 10-year felony. That gets their attention. That's a bit more than a magistrate's offense. Before, where they might see a \$1,000 fine, some of these guys are getting three years in prison."

Once Law Enforcement & Security recognized the increased pattern of copper thefts, one of its first priorities was to establish a relationship with salvage yards throughout South Carolina and build a database of their locations and the people who run them.

"That way, if there was a theft in that area, we already know who to talk to. The idea was to build a relationship — not an adversarial relationship, but one where we could work together to catch these people and arrest them," Cummings says. "Some of the scrap metal yards in the Horry-Georgetown area will actually call Agent Anderson. That's practically unheard of."

“If any one of them sees something suspicious, my phone’s ringing off the hook,” Anderson says. “A lot of people look at these scrap yards as being the bad guy in all of this. But if they’re running an honest business and abiding by the laws of the state, it’s not their responsibility to verify that everything they purchase isn’t stolen. That’s our responsibility and the responsibility of the police officers.”

The partnership with Santee Cooper’s transmission and distribution departments has also been an effective tool in Law Enforcement & Security’s success rate with catching copper thieves.

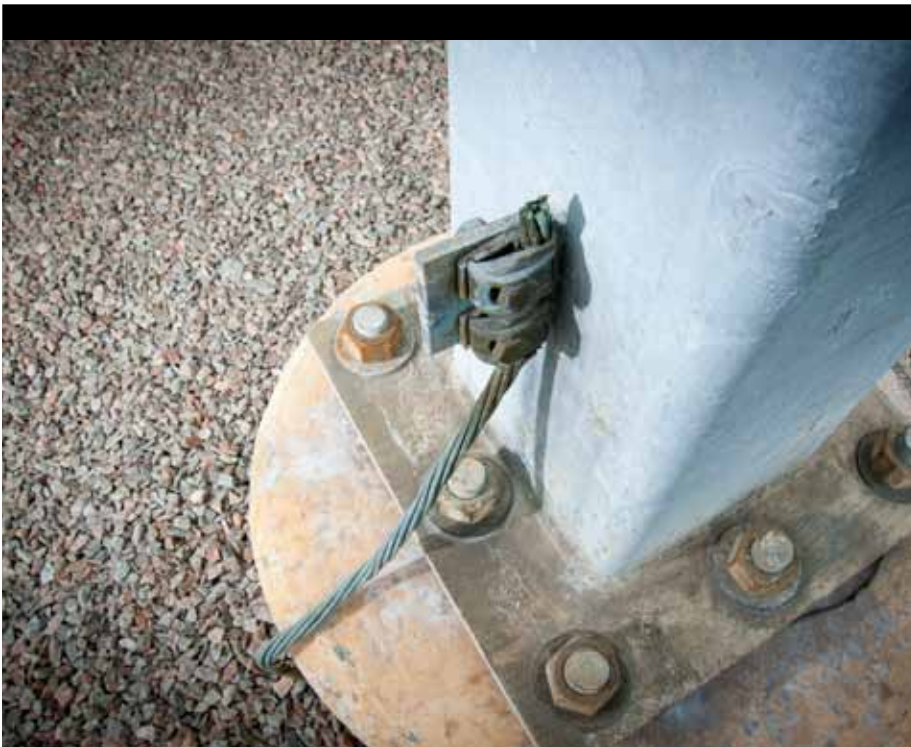
“As soon as they notice something is missing, they’re on the phone with us. That gives us a good starting point for our investigations,” Cummings says. “We’ve also worked with them to shore up the security at some of the warehouse and substation facilities.”

As a testament to Law Enforcement & Security’s success, Cummings says some of the investigators with the electric cooperatives approached him last year about holding an educational seminar.

“We put out a flyer to all of the police departments in the tri-county area, and we had a good response — over 100 people,” Cummings says.

From the people who attended their seminar, Law Enforcement & Security built a network of law enforcement officials who put out alerts whenever copper is reported stolen in their respective jurisdictions.





“We’ve got people from other agencies calling us all the time, and we do everything we can to accommodate them,” Anderson says. “A couple weeks ago, I had an officer from Kershaw County call and ask, ‘Do you know what this person would be talking about if he said he was missing a busbar,’ and I said, ‘As a matter of fact, I do, and if you hold on a second I’ll send you a picture.’ And, sure enough, he wound up making an arrest.”

Anderson says Law Enforcement & Security is viewed by other law enforcement agencies throughout South Carolina as being more experienced and more educated on the laws pertaining to these copper thefts because of the time its able to devote to their investigations. He has made presentations at other conferences held by the cooperatives and has been invited to additional conferences this year.

“We’re able to spend a lot of time on these cases,” Cummings says. “Most law enforcement agencies probably don’t have the manpower to do that. We have criminal cases, but we don’t have the more serious crimes that our fellow law enforcement agencies deal with daily.”

In fact, Cummings says Law Enforcement & Security has even cleared cases for other agencies.

“I can’t tell you how many people we’ve arrested who also confessed to stealing air conditioners or stripping the wires from houses under construction,” Anderson says. “We had one guy confess to 25 house break-ins. We’ve had guys confess to stealing air conditioners from churches. It amazes me the



Senior special agent Clark Whetstone

things we'll learn when we're just conducting our investigations for Santee Cooper. When that happens, we'll turn those cases over to local law enforcement."

Among the arrests he remembers most, Anderson sites one individual who confessed to over 50 thefts in eight counties and another person who'd sold \$140,000 worth of copper in eight months.

Earlier this year, the South Carolina Legislature took up the state's problem with copper theft.

"Prior to this most recent legislative session, copper theft had become an epidemic in South Carolina," says Geoff Penland, Santee Cooper's manager of state government relations. "Beyond utilities, farmers and churches were getting hit, and it was costing these people a lot of money, and it was costing the insurance companies a lot of money. So there became a strong interest to address the problem somehow — to pass a law to make it more difficult for copper thieves to get away with it."

Over the summer, the General Assembly passed a bill aimed at thwarting the theft of copper and other nonferrous metals by prohibiting businesses that buy scrap metal from paying cash and requiring anyone who sells copper, brass or aluminum to have a permit. The law took effect August 17.

"We appreciate the leadership of Rep. Harry Ott and Sen. Clementa Pinckney in recognizing that this was a problem and getting the General Assembly to take action," Penland says. **PS**



Above: Rory Avant, deputy chief of Law Enforcement & Security, speaks with Pete Lesando at Waccamaw Metal Recycling.





Connecting

to customers

one *tweet*

at a time

By Nicole A. Aiello

Photography by Jim Huff

We live in a global social network. With the touch of a button or a click of the mouse, we can send messages to the other side of the world in seconds. We keep in touch with family and friends by texting each other's mobile phones. We post messages to Facebook, tweet our desires to the world and share opinions with people we've never met through blogs. YouTube has turned even the most ordinary people into stars.

The world is changing rapidly and how we talk to one another is a direct product of technological developments like Facebook, Twitter and YouTube. Along with the rest of the business world, Santee Cooper is not immune to these changes. In fact, we have embraced these relatively new ways to reach out to customers and believe social media denotes an immense opportunity to share information with customers and to also have customers share information with us.

According to Laura Varn, vice president of Corporate Communications, two-way dialogue represents a critical point when it comes to social media, especially at Santee Cooper.

“Our customer service mantra has always been clear—be where our customers are and do business with them the way they want us to. Increasingly, our customers are on social media, and we need occupy that space with them,” said Varn. “Social media is about engagement, dialogue and having that two-way conversation. No longer can organizations solely push information out and no longer do customers expect to be communicated to only in this manner.”

Currently, Santee Cooper reaches out to customers through Facebook, YouTube, Twitter and the Santee Cooper blog. Varn said the company’s involvement in two-way dialogue on social

media sites was a natural evolution for Santee Cooper and for the Santee Cooper brand.

“Our brand is customer friendly, easy to do business with and environmentally friendly, and it’s exciting that social media allows our customers to be more directly involved,” Varn said. “Organizations don’t own their own brands; their customers do. Customer interaction with Santee Cooper through social media allows us to grow our brand together.”

There was a time, however, when South Carolinians didn’t have the means to easily communicate across states and countries. Before the U.S. and the rest of the world got wired, it could take hours or days just for South Carolinians in the Lowcountry to communicate with their Upstate brethren.

America was officially connected in real time when the first message “What hath God wrought” buzzed over a telegraph wire from Washington, D.C., to Baltimore in 1844. Soon, all major cities had telegraph wires and, although still in its infancy, the era of instant communication had arrived. There was no looking back.

In 1876, Alexander Graham Bell spoke the first words to his assistant on his new invention—the telephone. To be fair, Elisha Gray also invented a way to speak over telegraph wires. Unfortunately for Gray, Bell made it to the patent office just a few short hours before him. Regardless of who got the glory, its invention once again changed the way the world connected. However, it would take another 28 years before the first bicoastal conversation would take place. By that time hundreds of thousands of telephones were in use daily. Not only was there a need for such an invention; there was also a strong desire for the interaction it provided.

As citizens of the 21st Century, waiting nearly three decades for technology to advance far



enough to connect a phone call from New York to San Francisco sounds excruciatingly slow. Luckily, new advances in communication technology are rapidly evolving, adapting and progressing at the speed of light, feeding our need for instant, real-time information.

When computers, mobile phones and that little thing called the Internet came along, the scope of communication morphed once again, and people and businesses adapted. Many of us cannot imagine a time when business was done without using computers, but it wasn't that long ago that there was a need for typewriters and carbon paper.

And now, social media has taken the reigns of the race to interact with one another and is leading the way. According to searchenginejournal.com, citing more than a handful of other websites, in September 2005 only 16 percent of 18 to 29 year olds and 12 percent of 30 to 49 year olds used social networking sites. As of May 2010, those numbers exploded to 86 percent and 61 percent respectively. Today Facebook has more than 640 million registered users.

Searchenginejournal.com's informational graphics also show Twitter's popularity and content growth. Twitter user numbers are up 26 percent just over the last year, and there has been a 252 percent growth in the number of daily tweets.

Kevin Langston, public relations specialist II in Corporate Communications, is the social media guru at Santee Cooper, and you will rarely see him without his smartphone or iPad.

Langston also believes Santee Cooper's philosophy regarding social media is forward-thinking and a victory for customers.

"Being this involved in social media is pretty progressive for a public utility, especially one serving a number of rural areas in South Carolina," Langston said. "We've been level-headed and realistic in our expectations. We want to hear from our customers on how they'd like us to use social media to better serve them, yet realize not

everyone is going to have daily conversations with their utility company."

Both Varn and Langston say different circumstances could change that, like during hurricanes and other emergencies. When that time comes, Varn and Langston agree social media will be an invaluable tool to communicate real-time with customers.

"Customers usually don't think about their utility provider when the lights are on. They think about us when their lights go off or if they're having trouble paying their bills," Varn said. "And we will be there through social media, phone and in person when our customers need us." **PS**

You can interact with Santee Cooper online at

www.facebook.com/santeecooper
www.twitter.com/santeecooper
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You can also find Santee Cooper online at

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www.reducetheuse.com

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Santee Cooper Green Power

turns

By Willard Strong Photography by Jim Huff

*Santee Cooper
Celebrates
the 10th
anniversary of
Green Power*



Ten years ago, a remarkable thing happened in the Palmetto State's history of electric power generation.

On Labor Day weekend, an internal-combustion engine capable of producing 2 megawatts (MWs) of electricity officially sprang to life at the Horry County Landfill near Conway. The engine used methane gas from decaying garbage as a fuel, and the energy it produced was placed on power lines.

This was the first time in South Carolina that "Green Power," or energy made from a renewable resource, was made available for electric customers to purchase. Green Power is defined as renewable electricity made from landfill gas, the sun, wind or biomass, such as wood products.

So began Santee Cooper's impressive Green Power journey, a small, yet steady move to diversify its generating fleet. Two more units at the Horry County site were added later, bringing the facility's generating capability to 3 MWs, enough electricity to power nearly 1,500 average-sized homes in the state.



Santee Cooper's first Green Power Generating Station at the Horry County Landfill entered commercial operation September 4, 2001.



The 3 megawatt Berkeley County Green Power Generating Station is located off U.S. Highway 52 between Moncks Corner and Goose Creek.

The bookend to siting, financing and constructing six generating stations using landfill gas as fuel from the Upstate to the Lowcountry was put in place this past March. That's when the 3 MW Berkeley County Green Power Generating Station was dedicated. Located at a landfill owned and operated by the Berkeley County Water & Sanitation Authority, the site is off U.S. Highway 52 between Moncks Corner and Goose Creek.

At the dedication, Santee Cooper President and CEO Lonnie Carter reiterated several ecologically friendly themes the utility has stressed since placing methane-fueled stations on the grid.

"This is a great environmental story for several reasons," said Carter. "Landfill gas is a cost-effective source of renewable energy. Landfill gas as a generating fuel source also solves an environmental problem, by removing methane gas from the environment. Finally, by converting the methane gas into electricity, we are making sure that a reliable source of energy doesn't go to waste."

Decomposing landfill waste produces methane, a gas 21 times more harmful to the environment than carbon dioxide. To reduce the impact of the landfill, methane can be collected instead of released directly in the atmosphere.

At the Berkeley County site, the process from the landfill to the Caterpillar engines that power a generator begins by capturing methane from 60 landfill-gas extraction wells. That gas is captured from those wells and piped to the station.

To get where we are today, we have worked with some of the biggest names in the landfill industry, such as Waste Management, at the 8 MW Richland County Landfill Generating Station.

Getting that electricity to the people is a good example of Santee Cooper's close relationship with the electric cooperatives, all 20 of which have Santee Cooper as their power source. The electric co-ops allowed the Green Power stations to deliver power onto co-op

SANTEE COOPER GREEN POWER GENERATING STATIONS ONLINE

Site	Generating Capability	Commercial Operation Date	Cooperative
1. Horry County Landfill Generating Station	3 MWs	September 2001	Horry
2. Lee County Landfill Generating Station	10 MW	February 2005	Black River
3. Richland County Landfill Generating Station	8 MWs	February 2006	Tri-County
4. Anderson Regional Landfill Generating Station	3 MWs	September 2008	N/A
5. Georgetown County Landfill Generating Station	1 MW	March 2010	Santee
6. Berkeley County Green Power Generating Station	3 MWs	March 2011	Berkeley



distribution lines, that run close to the stations through Santee Cooper's transmission network.

Selling Green Power

All of Santee Cooper's 163,000 retail and commercial customers in Berkeley, Georgetown and Horry counties have the option to purchase Green Power. So do the 700,000 electric cooperative customers in all of the state's 46 counties.

"Green Power generation is typically more expensive than traditional sources of electricity," said Steve Spivey, Santee Cooper's manager

of renewable energy. "Santee Cooper has a creative way to keep growing our renewable generation without burdening customers. What we've done since 2001 is ask customers to voluntarily purchase blocks of Green Power with the revenue reinvested into new or expanded sources of renewable energy."

Customers can buy as little as 100 kilowatt-hours for \$3 per month and additional 100-kWh blocks for \$3 each. Commercial customers can purchase Green Power in 200-kWh blocks for \$6 each.

**The purchase
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not driving your
vehicle for almost
three months.**

The purchase of 200 kWhs per month has the same environmental impact as planting one-third of an acre of trees or not driving your vehicle for almost three months. (Source: EPA e-Grid SERC Sub-region System Average)

Some of these environmentally conscious customers include municipalities that are Santee Cooper Green Power cities, and purchase Green Power for a percentage of the power used at municipal facilities. Eight in all, they include the cities of Myrtle

Beach and Conway and North Myrtle Beach and towns of Moncks Corner, St. Stephen, Loris, Briarcliffe Acres and Surfside Beach.

In October 2006, Santee Cooper opened yet another chapter in the Green Power story, targeting customers of other electric utilities who did not have access to Green Power produced at Santee Cooper's landfill generating stations.

"The main thing the public should know about Santee Cooper's Green Power program is that the money raised through Green Power sales is put entirely into the development of new renewable energy," Spivey said.

Embracing Solar Energy, Another First

During the time Santee Cooper was building landfill gas stations, its leadership looked to the sun as another potential source of renewable energy.

In July 2006, the 16-kilowatt Coastal Carolina University Green Power Solar Pavilion entered commercial operation, another significant milestone that showed Santee Cooper was willing to diversify its Green Power portfolio. At the facility's dedication three months later, Carter noted the significance of the solar panels installed at Conway.

"Today is a historic day for South Carolina," Carter said. "There are many firsts: the state's first solar Green Power site, the first solar photovoltaic project at a public university in the state and the first project funded by Green Power participants. Our corporate mission is to improve the quality of life for the people of South Carolina. One of the chief ways we do that is by protecting our environment. Today's solar dedication delivers on our promise of finding innovative ways of enhancing our environment while adding value to the state."

The solar power, capable of powering about 75 personal computers, is placed on Santee Cooper's lines, which serve Conway and Coastal Carolina. A specially designed Web-based kiosk at the R. Cathcart



The solar canopies at Coastal Carolina University are capable of producing up to 16 kilowatts.

Smith Science Center includes real-time energy output information from the facility in addition to other renewable energy information.

Santee Cooper added a research component to its solar portfolio in May 2009, when the Center for Hydrogen Research near Aiken and Santee Cooper dedicated a 20-kilowatt solar panel array that advances the development of hydrogen generation from renewable energy sources.

The array enables the CHR array to research applications of hydrogen as a storage solution for solar energy. The photovoltaic array has been installed in two locations, on the roof of the CHR connected to the center's education, training and development laboratory, and in a ground-level solar park that gives access to school groups and other interested parties. The roof hosts a 14-kW set of panels, and the solar park holds the remaining 6 kW. It attaches to the grid through an arrangement with Aiken Electric Co-op.

Solar power by Santee Cooper is also produced by solar canopies at the Technical College of the Lowcountry, located near Bluffton. On Feb. 1, 2010, a 20-kW solar array was dedicated at the college's New River campus.

The project includes a series of nine canopies, each covered with 10 solar panels, that shelter a bench. The power is generated, metered and supplied to the electrical distribution system of Palmetto Electric Co-op, which serves Hilton Head Island and rural areas of Allendale, Beaufort, Hampton and Jasper counties.



The dedication of the solar array at the Center for Hydrogen Research near Aiken drew dignitaries throughout the state.



Solar panels at the Technical College of the Lowcountry provide shade from the summer heat.

“We have promoted the benefits of renewable Green Power for years to our customers, and our customers have clearly said they want more,” Palmetto Electric Co-op President and CEO G. Thomas Upshaw said at last year’s dedication. “I can think of no better place for this demonstration project than at Technical College of the Lowcountry, where it can be an anchor for continuing research and development into renewable energy.”

On April 18, 2011 Santee Cooper and the South Carolina Energy Office dedicated the Grand Strand Solar Station, officially launching the state’s largest solar power installation. It has a rated capacity of 311 kilowatts generated by 1,325 solar panels. The panels are mounted on rooftops and an adjacent field at Santee Cooper’s warehouse facilities in Myrtle Beach. When it went online, the station increased total solar capacity for South Carolina by 35 percent.

Santee Cooper Solar Schools

In 2007, Santee Cooper began working with the state’s electric cooperatives to install 2-kW solar arrays at middle schools throughout the state. The first installation was at Hilton Head Middle School with Palmetto Electric Cooperative.

Each array provides hands-on teaching, with an energy curriculum endorsed by the S.C. Department of Education. A Web-based monitoring system provides real-time access to system performance from any Internet enabled computer.

Today, there are 19 Solar Schools in electric cooperative territory and one served by Santee Cooper at Myrtle Beach Middle School.



Mike Poston, vice president of Retail Services, spoke at the Grand Strand Solar dedication.

Venturing Into Wind

Santee Cooper has been researching the validity of wind energy since 2005, and in December 2010, we installed the state’s first utility wind turbine, a 2-kW structure in North Myrtle Beach.

Students in Myrtle Beach get a hands-on lesson on how solar energy works.

It is providing critical data on what wind energy can, and just as importantly, cannot do.

We have partnered with Coastal Carolina University, Clemson University and others interested in the ongoing quest for commercially viable renewable energy in South Carolina.

A Decade of Achievement Provided Impressive Start

Since that first Green Power Station at the Horry County Landfill went into commercial operation, Santee Cooper has:

- Generated approximately 580,000 megawatt-hours of Green Power
- Sold approximately 163,559 MWhs to Green Power customers

Green Power sales over the last decade are equivalent in today's terms to the electricity needed to power nearly 15,000 average American homes for a year and cancel the annual carbon dioxide emissions of more than 24,000 vehicles. (Source: EPA 2011 e-Grid version 1.1 SEVC Sub-region System Average)

In October, Santee Cooper and the state's electric cooperatives observed the 10th anniversary of Green Power by planting small live oak trees at each of the Solar Schools. It was an appropriate symbol of sustainability for a program that continues to grow green. **PS**

Through 2010, Santee Cooper had **1,743** residential Green Power customers

Green Power Partners/Commercial totaled **489**

Customers reached through co-ops and municipalities totaled **3,724**

Green Tag customers totaled **58**



The first wind turbine in South Carolina installed by an electric utility was erected by Santee Cooper in November 2010.

new²⁰¹¹Source

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Nuclear negotiations

Santee Cooper, which joined with SCE&G and filed an application in 2008 to build two new nuclear reactors at the V.C. Summer Nuclear Generating Station, signed two letters of intent in July to negotiate a potential minority interest in the planned new nuclear project. Santee Cooper signed a letter of intent with Duke Energy Carolinas on July 20 and a separate letter of intent with Florida Municipal Power Agency (FMPA) on July 22.

Santee Cooper owns 45 percent of the V.C. Summer expansion, and SCE&G owns 55 percent. In 2010, Santee Cooper began evaluating its level of ownership in the new nuclear facilities, a review that continues and has been disclosed with rating agencies and other key stakeholders. V.C. Summer units 2 and 3 are projected to come online in 2016 and 2019.

The letter of intent with Duke Energy Carolinas is for 5 to 10 percent of the capacity and output from units 2 and 3, or roughly 10 to 20 percent of Santee Cooper's ownership interest in the two new units. The letter of intent with FMPA is for 2 to 10 percent of the capacity and output, which is roughly 5 to 20 percent of Santee Cooper's ownership interest.

Santee Cooper previously announced a letter of intent with Orlando Utilities Commission in March, also for 5-10 percent of the capacity and output from the two new V.C. Summer units, or 10-20 percent of Santee Cooper's ownership interest in the project.

Rate review begins

The Santee Cooper Board of Directors has authorized management to study the utility's current electric rates and whether the rates will support future expenses, especially environmental compliance costs and construction of the planned new nuclear units at V.C. Summer Nuclear Station.

The study is expected to take several months, with management scheduled to report its study recommendations at the board's May 2012 meeting. If management recommends adjusting Santee Cooper's electric rates, the board could then authorize a public comment period of several months and ultimately vote on new proposed rates in the third quarter of 2012.

Santee Cooper last adjusted its electric rates in 2009, with an overall 3.4-percent rate increase. It was the utility's first increase in 13 years.

"Controlling costs is a top priority as Santee Cooper continues to deliver reliable, affordable and environmentally responsible electricity to our customers," said Lonnie Carter, Santee Cooper president and CEO. "We have made deep cuts in our operating budget the past two years to put off rate adjustments, and we have contracted to sell power to other utilities to help offset future costs. We have also aggressively grown our Reduce The Use program to help customers learn to save money by using less electricity."



With a trailer full of energy-hogging light bulbs behind them ready for recycling, representatives from Santee Cooper, Hagemeyer North America and Waste Management announce they will continue the free fluorescent light bulb recycling program until a second trailer is filled. The trailer is located at 1525 U.S. Highway 501 in Myrtle Beach.

Refunding bond sales net savings

Successful refunding bond sales in August and September are helping Santee Cooper continue to achieve savings for customers that offset cost increases the utility is incurring in key business areas, including new regulatory requirements and fuel and transportation costs.

Both sales received strong ratings of AA from Fitch, AA- from Standard & Poor's and Aa3 from Moody's Investors Service. In August, the Santee Cooper board approved a \$288,515,000 refunding bond sale with present value savings of \$22.6 million. The bonds were issued to

redeem portions of Santee Cooper's 2002 Series D and 2004 Series A bonds. In September, the board approved a \$135,855,000 refunding bond sale with present value savings of \$7.7 million, and those bonds were issued to redeem portions of the utility's 2002 Series B and 2007 Series A bonds.

Full details of the bond sales are available at www.santeecooper.com/investor-relations. **PS**

Energy Matters



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